



2006 (7TH) ROUND SALMON APPLICATION FORMS

ESTUARINE/NEARSHORE MARINE

QUILCENE ESTUARINE WETLANDS RESTORATION
& PROTECTION (SCHINKE)

18h

JUNE 19, 2006

FOR USE IN THE 2006 GRANT CYCLE ONLY

Application Authorization Memorandum

Each organization submitting a project must complete this form.

TO: Salmon Recovery Funding Board (SRFB)
PO Box 40917
Olympia, Washington 98504-0917

THROUGH: Hood Canal Coordinating Council
(lead entity name)

FROM: Hood Canal Salmon Enhancement Group
(applicant name)

Through the lead entity identified above, the SRFB is hereby requested to consider this application for financial assistance for the Salmon Recovery project(s) described below and to grant funding from such State and Federal sources as may be available. This application is prepared with knowledge of and in compliance with SRFB's policies and procedures. Further, we agree to cooperate with the SRFB by furnishing such additional information as may be necessary to execute a SRFB Project Agreement and to adhere to all appropriate state and federal statutes governing grant monies under the Project Agreement. We are aware that the grant, if approved, is paid on a reimbursement basis. We agree that all application materials, including photos, slides, site drawings, maps, etc., become the property of IAC/SRFB and may be used by IAC/SRFB for education, information, or other non-commercial purposes in publications, presentations or on the IAC/SRFB web site.

Project Name(s): **Quilcene Estuarine Wetlands Restoration & Protection**

(Attach list

if necessary)

I/we certify that to the best of our knowledge, the data in this application is true and correct. In addition, I/we certify that the matching resources identified in the grant are committed to the above project. I/we acknowledge responsibility for supporting all non-cash commitments and donations should they not materialize.

Authorized Representative:



8/30/06

(signature)

(date)

Printed Name and Title: Al Adams, Board Member

1. General Application Information

(ENTER ON PRISM TAB 1)

Project Name **Quilcene Estuarine Wetlands Restoration & Protection (Schinke)**

Project Type (check one)

☒ **Restoration only** (Estuarine/Nearshore Marine)

☐ **Combined** (acquisition and restoration)

2. Applicant / Organization Information
(ENTER ON PRISM TAB 1 – SEARCH FOR ORGANIZATION)

Organization Name **Hood Canal Salmon Enhancement Group**

Organization Type (check one)

☐ City/Town

☐ County

☐ Private Landowner

☐ Conservation District

☐ Native American Tribe

☐ Non-profit Organization

☒ RFEG

☐ Special Purpose District

☐ State Agency

Organization Address

Address **PO Box 2169**

City/Town **Belfair**

State, Zip **Washington 98528**

Telephone **#360 275-7575**

FAX **#360 275-0648**

Internet e-mail address eileen@hcseg.org Web site URL www.hcseg.org

3. Project Contact Information

Complete one for each contact.

(ENTER ON PRISM TAB 1 – SEARCH FOR PERSON)

☐ Mr. ☐ Ms. Title **Executive Director**

First Name **Neil**

Last Name **Werner**

☒ Primary Contact OR ☐ Alternate Contact

Contact Mailing Address

Address **PO Box 2169**

Work Telephone **#360 275-0373**

City/Town **Belfair**

FAX **#360 275-0648**

State, Zip **Washington 98528**

Internet e-mail address neil@hcseg.org

4.a. Goal and Objective and Measurements Estuarine/Nearshore Marine (Restoration projects only)

Select one goal and one objective that best fits your project
and respond all to the measurements for that goal and objective.

(ENTER GOAL AND OBJECTIVE ON PRISM TAB 2; SAVE, THEN
ENTER MEASUREMENT RESPONSES ON PRISM TAB 6)

<p>Goal: The goal of the project is restore estuarine and nearshore conditions and processes in the marine environment.</p> <p>Objective: The objective of the project is to restore shoreline habitat diversity and function.</p> <p>Objective: The objective of the project is to restore beach sediment transport processes.</p>	<p>X</p> <p><input type="checkbox"/></p>
<p>Measurement: Amount of estuarine/nearshore area created? [Acres of estuary proposed for restoration and actually returned to saline nearshore conditions.]</p>	<p>___50___ Acres</p>
<p>Measurement: Amount of estuarine/freshwater area of invasive species treated? [The acreage of invasive species proposed for treatment and actually treated in an estuary. A treatment may only be for a portion of an estuary such as removal of Spartina.]</p>	<p>_____ Acres</p>
<p>Measurement: Amount of tidal channels restored? [feet of tidal channel proposed for restoration.]</p>	<p>___2700___ Feet</p>
<p>Measurement: Length of levee section removed? [The number of feet of levee or dike removed.]</p>	<p>___3000___ Feet</p>

5. Short Description of Project

Describe project, what will be done, and what the anticipated benefits will be in 1500 characters or less.
(ENTER ON PRISM TAB 2)

NOTE: Many audiences, including the SRFB, SRFB's Technical Review Panel, media, legislators, and the public who may inquire about your project use this description. Provide as clear, succinct and descriptive an overview of your project as possible – many will read these 1-2 paragraphs!

The description should state what is proposed. Identify the specific problems that will be addressed by this project, and why it is important to do at this time. Describe how, and to what extent, the project will protect, restore or address salmon habitat. Describe the general location, geographic scope, and targeted species/stock. This short description should be the summary of the detailed proposal set out under Evaluation Proposal, with particular emphasis on questions I-IV.

The database limits this space to 1500 characters (including spaces); any excess text will be deleted.

Quilcene Bay, Washington and its associated coastal wetlands provide significant habitats for a wide diversity of wildlife and fish populations including marine mammals, seabirds, migratory shorebirds, migratory and breeding waterfowl, neotropical birds, raptors, salmon, clams and Dungeness crab. Much of Quilcene Bay's estuarine wetlands have been lost by the impacts of agricultural diking, road building, and flood control projects. The Quilcene Estuarine Wetlands Restoration and Protection Project will return 38 acres of coastal wetland habitats to properly functioning conditions for the benefit of numerous healthy and imperiled fish and wildlife species. The project is identified in the Hood Canal/Water Resources Inventory Area (WRIA) 17 Limiting Factors Analysis (Washington State Conservation Commission 2002) as a Tier 1 (most important habitat), Priority 1 (most important project) project for the recovery of several Hood Canal salmonid species listed as "threatened" under the Endangered Species Act. Work will be accomplished by 1) permanently removing livestock from the 38 acre restoration site, 2) completely removing 3,000 feet of saltwater levee, 3) reestablishing a properly functioning tidal channel network, and 4) reestablishing appropriate plant communities upon adjacent emergent wetlands. The restored estuarine wetlands (38 acres) and an adjacent 12 acres of estuarine wetlands (50 acres total) will be conserved in perpetuity using a conservation easement.

6. Summary of Funding Request and Match Contribution

Remember to update this section whenever changes
are made to your cost estimates.
(ENTER ON PRISM TAB 3)

TOTAL PROJECT COST (A + B) (Sponsor Match & SRFB Contribution)

\$ 726,570.00

A. Sponsor Match Contribution (15% minimum is required for match)

Appropriation/Cash	\$ _____
Bonds - Council	\$ _____
Bonds - Voter	\$ _____
Cash Donations	\$ _____
Conservation Futures	\$ _____
Donations	
Donated Equipment	\$ _____
Donated Labor	\$ _____
Donated Land	\$ _____
Donated Materials	\$ _____
Donated Property Interest	\$ _____
Force Account	
Force Acct - Equipment	\$ _____
Force Acct - Labor	\$ _____
Force Acct - Material	\$ _____
Grants*	
Grant - Federal	\$ 426,570 _____
Grant - Local	\$ 100,000 _____
Grant - Private	\$ _____
Grant - State	\$ _____

Total Sponsor Match Contribution

\$ 526,570
15% Minimum Match Required
of A. TOTAL PROJECT COST

B. SRFB Contribution (grant request)

\$ 200,000
\$5,000 Minimum Request

***Note, be sure to identify the name and type of any matching grant in the Application Questionnaire Section.**

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8. Cost Estimate Estuarine/Nearshore Marine

ESTUARINE AND MARINE NEARSHORE includes those items that affect or enhance fish habitat within the shoreline riparian zone or below the mean high water mark of the water body. Items include work conducted in or adjacent to the intertidal area and in subtidal areas. Items may include beach restoration, bulkhead removal, dike breaching, plant establishment/removal/management, and tide channel reconstruction.

Complete only items that apply to your project.

TOTAL COST must include the SRFB and Sponsor's Match Contribution.

Use only whole dollar amounts.

(ENTER ON PRISM TAB 5)

Item	Unit	Qty.	Total Cost	Description Needed	Description (60 characters max.)
Beach nourishment	Cubic yds			Optional	
Bulkhead removal/reconstruction	Linear ft			Optional	
Clear and grub	Sq ft		10,000	Optional	
De-water/diversion dam	Each			Describe	
Derelict gear removal	# nets			Describe	
Dike breaching/removal	Linear ft	3000	380,000	Optional	
Erosion control	Sq ft			Optional	
Excavation	Cubic yds			Optional	
Fencing	Linear ft			Optional	
Flushing/Passage Improvements	Lump sum			Describe	
Landfill/debris removal	Cubic yds			Optional	
Mobilization/demobilization	Lump sum		15,000	Optional	
Permits	Lump sum		10,000	Optional	
Plant removal/control	Acres			Optional	
Riparian plant installation	Sq ft		25,000	Describe	Replant native saltmarsh species per WDFW biologists on disturbed areas
Riparian plant materials (species)	Each			Describe	
Road access	Lump sum		20,000	Optional	
Shoreline restoration	Linear ft			Describe	
Signage	Each			Describe	
Site maintenance	Lump sum			Describe	
Tidal channel reconstruction	Lump sum		67,500	Optional	
Tide gate removal/improvements	Each			Optional	
Traffic control	Lump sum			Describe	
Utility crossing	Lump sum			Describe	
Water management	Lump sum			Describe	
Woody debris placement	Each			Describe	
Work site restoration	Acres			Describe	
Sales Tax			43,470		
Sub-Total			570,970		
Architecture, Engineering, & Admin. (30% of Sub-Total)			155,600		
TOTAL COSTS			726,570		

9a. Application Questionnaire

All applicants must answer the following questions.
(ENTER ON PRISM TAB 8)

Cost Efficiencies

For any grants listed in the Summary of Funding Request and Match Contribution Section, are there any restrictions on the use of these grant funds? When and how long will the grant funds be available to this project? ***No restrictions other than for restoration activities associated with this project. Grant funds are available upon acceptance and then from two to five years for completion.***

Describe the type of donated labor (skilled and unskilled), donated equipment, and donated materials that will be used for this project, identified in the Summary of Funding Request and Match Contribution Section. ***Donated hauling from local businesses for removal of tires and misc. debris from the dikes is included in the local match as is volunteer labor to prepare the tires for disposal.***

Land Ownership

What type of landowner currently owns the property? (Federal, Local, Private, State or Tribal.)
The land is owned privately by Larry and Arlene Schinke

What is the current land use of the site, and its history? Describe past human uses and salmon habitat functions. ***Since diking in the early 1900's this property has been utilized extensively for cattle grazing and hay production.***

Worksite Location Data

What are the geographic coordinates of the work site(s) (in degrees, minutes and seconds)? [If you do not have them, you may leave this question blank.] ***(Latitude 47°, 48', 55" North - Longitude 122°, 52' 02" West.) on property owned by the Schinke family.***

What is the township/range/section of the work site(s)? ***Quilcene Bay Estuary in the SE ¼ of the SE ¼ of Section 24, TWN 27N, Range 2 West, WM.***

In what county(s) is the work site(s) located? In what city, if applicable? ***This project is located just south of the Linger Longer Bridge over the Big Quilcene River, in the town of Quilcene, Jefferson County, Washington.***

In what Water Resource Inventory Area(s) (WRIA) is the work site located? (Provide WRIA name and WRIA number.) ***WRIA 17***

Is the work site on a stream and/or other waterbody? If yes, name the stream and/or waterbody. If the stream is a tributary of a larger stream, also name the larger stream. If you know the river mile, list it here. ***This project is located on Quilcene Bay and is just South of the Big Quilcene River***

Is your work site(s) located within estuarine or saltwater habitat? If so, name it. How close is it to fresh water systems? Name any other estuary or habitat adjacent to this site. ***This project is located on Quilcene Bay and is just South of the Big Quilcene River. This site is influenced by both the Big Quilcene River and Indian George Creek and their associated estuaries.***

Is the work site(s) located within a park, wildlife refuge, natural area preserve, or other recreation or habitat site? If yes, name the area. ***No***

9c. Application Questionnaire

Non-profit organizations must answer the following questions.

Is your organization registered as a non-profit with the Washington Secretary of State? If so, what is your Unified Business Identifier (UBI) number? ***Yes #601-285-471***

What date was your organization created? ***1990***

How long has your organization been involved in salmon and habitat conservation? ***16 Years***

10. Work Site Information (ENTER ON PRISM TAB 9)

Driving Directions (provide directions that will enable staff to locate the project): ***This project is located on Quilcene Bay and is just South of the Big Quilcene River***

Current Landowner(s) of the site (name and address). Remember to complete the Landowner Willingness Form. ***Larry & Arlene Schinke 14813 S.E. Fairwood Blvd. Renton, WA. 98058***

11. Permits

Check the appropriate boxes to indicate required and/or anticipated permits.
General permit information can be obtained at the Dept. of Ecology Permit Assistance Center
1-800-917-0043 or on their Internet site
<http://www.ecy.wa.gov/programs/sea/pac/index.html>.
(ENTER ON PRISM TAB 10)

Permits	Comments Regarding Permit Status
<input type="checkbox"/> Aquatic Lands Use Authorization (Dept of Natural Resources)	
<input type="checkbox"/> Building Permit (City/County)	
<input type="checkbox"/> Clear & Grade Permit (City/County)	
<input checked="" type="checkbox"/> Cultural Assessment [Section 106] (CTED-OAHP)	
<input checked="" type="checkbox"/> Dredge/Fill Permit [Section 10/404 or 404] (US Army Corps of Engineers)	
<input checked="" type="checkbox"/> Endangered Species Act Compliance [ESA] (US Fish & Wildlife/NMFS)	
<input type="checkbox"/> Forest Practices Application [Forest & Fish] (Dept of Natural Resources)	
<input type="checkbox"/> Health Permit (Dept of Health/County)	
<input checked="" type="checkbox"/> Hydraulics Project Approval [HPA] (Dept of Fish & Wildlife)	
<input type="checkbox"/> NEPA (Federal Agencies)	
<input checked="" type="checkbox"/> SEPA (Local or State Agencies)	
<input checked="" type="checkbox"/> Shoreline Permit (City/County)	
<input checked="" type="checkbox"/> Water Quality Certification [Section 401] (County/Dept of Ecology)	
<input type="checkbox"/> Water Rights/Well Drilling Permit (Dept of Ecology)	
<input type="checkbox"/> Other Required Permits (identify)	
<input type="checkbox"/> None – No permits Required	

12. Salmonid Species Information

Identify one or more targeted Salmonid species (directly on-site, indirectly downstream or within the rearing/migration corridor) whose habitat conditions you are attempting to improve or protect. Select one Primary Species.
(ENTER ON PRISM TAB 11)

Salmonid Species	Species Targeted (select as many as apply)	Primary Species (select only one)
Bull Trout	<input type="checkbox"/>	<input type="checkbox"/>
Chinook	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chum	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Coho	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cutthroat	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pink	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Summer Chum	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Steelhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>

13a. Habitat Factors Addressed

Identify one or more Habitat Factors being addressed by this Project
and select one Primary Factor.

For definitions of Habitat Factors, see Manual 18b, Appendix B.

(ENTER ON PRISM TAB 11)

Habitat Factors	Project Addresses (select as many as apply)	Primary Factor (select only one)
1. Biological Processes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Channel Conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Estuarine and Near-shore Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. Floodplain Conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Lake Habitat	<input type="checkbox"/>	<input type="checkbox"/>
6. Loss of Access to Spawning and Rearing Habitat	<input type="checkbox"/>	<input type="checkbox"/>
7. Riparian Conditions	<input type="checkbox"/>	<input type="checkbox"/>
8. Streambed Sediment Conditions	<input type="checkbox"/>	<input type="checkbox"/>
9. Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Water Quantity	<input type="checkbox"/>	<input type="checkbox"/>

13b. Species/Habitat Factors Information Sources

For Species Information provide the source and indicate if the species listed are directly on-site at some point in their life stage (i.e. SaSI, WDFW Stream Catalog, Stream Survey/Field Observation, Limiting Factors Distribution Maps).

For Habitat Factors Information list the study/report and date identifying the habitat factors for your project (i.e. SaSI, limiting factors analysis, watershed analysis, other assessments or studies).

(ENTER ON PRISM TAB 11)

Study Name	Author	Date
Hood Canal/Water Resources Inventory Area (WRIA) 17 Limiting Factors Analysis	Washington State Conservation Commission	2002
Summer Chum Salmon Conservation Initiative	WDFW, Pt. No Pt. Treaty Tribes	2002
Salmon Habitat Recovery Strategy	HCCC	Version 03-2004
Hood Canal/eastern Strait of Juan de Fuca Summer chum Salmon Recovery Plan	HCCC	Current
Temporary residence by juvenile salmon in a restored estuarine habitat	Simenstad & R. M. Thom	1992
Juvenile residency in a marsh area in a marsh area of the Frazier River estuary.	D. A. Levy & T. J. Northcote	1982
Salmon & Steelhead Habitat Limiting Factors	G. Correa/WA Conservation Comm.	2003
Salmon Habitat Recovery Strategy	HCCC	Version 03-2004

14. Evaluation Proposal Estuarine/Nearshore Marine

Applicants must respond to the following items. The local citizen and technical advisory groups will use the evaluation proposal to evaluate your project. Applicants should contact their lead entity for additional information that may be required.

Up to eight pages may be submitted for each project evaluation proposal.

(SUBMIT INFORMATION VIA PRISM ATTACHMENT PROCESS OR ON PAPER)

I. BACKGROUND

Describe the fish resources, the current habitat conditions, and other current and historic conditions important to understanding this project. Be specific—avoid general statements. When possible, document your sources of information by citing specific studies and reports.

The many portions of Quilcene Bay, like many other estuarine and nearshore systems in Hood Canal, were diked and channelized during the times of early development. At the time, the floodplain of the lower watershed of the Big Quilcene was acquired primarily for agriculture use and later for residential growth. The lower river and adjacent estuary was diked and essentially converted from a vast functioning tidal marshland area. As the management of the land changed, some agricultural areas were later converted further to recreational waterfront.

The vital role estuaries play in summer chum salmon recovery is a basic tenant of salmon biology (Walters et al. 1978; Healy 1987; Levy and Northcote 1982). Properly functioning estuaries are recognized as a critical environment relating to the salmon lifecycle. The ability of estuaries to provide abundant food supply, wide salinity gradients, and diverse habitats is particularly important to anadromous fish in terms of rearing, feeding and osmoregulatory acclimatization (Macdonald et al 1987).

Both the Big Quilcene and the Little Quilcene rivers produce federally listed summer chum which rely on natural processes associated with estuarine and nearshore habitats during their migration through Hood Canal and the Eastern Straits of Juan De Fuca (Simstad 1998). Other species of salmon, including coho (Tscharplinski 1982) and Chinook (Levy and Northcote 1982; Healy 1980A; Healy 1980B; Congleton et al 1981; Schreffler et al 1992) are also known to inhabit estuaries in high densities. Federally listed Chinook also spawn in the Big and Little Quilcene Rivers.

This is the third of three estuary restoration plans in Quilcene Bay to remove dike systems that have altered the conditions and processes which provide for optimal estuarine functions.

Since 1990, numerous property parcels within and adjacent to Quilcene Bay have been acquired by Jefferson County (approximately 45 acres) and the

Washington Department of Fish & Wildlife (WDFW) (approximately 260 acres). WDFW property adjoins the project site.

The Quilcene Estuarine Wetlands Restoration and Protection Project is Phase 6 of the overall Quilcene Bay Ecosystem Restoration Project. Other phases of the project are identified in figure 2. Earlier phases are: 1. Big Quilcene riverine and estuarine dike removal north, completed 1995 (upper) and 2005 (lower). 2. Indian George Estuary restoration completed 2000 to 2001. 3. Donovan Creek tidal prism restoration funded and scheduled for completion in 2006. 4. Nylund saltwater dike removal & estuarine marsh restoration, funded and scheduled for completion in 2007. 5. Little Quilcene riverine dike removal and estuarine channel restoration funded and scheduled for completion in 2007 to 2008. Future phases will likely include: 7. Little Quilcene delta cone removal. 8. Big Quilcene delta cone removal. 9. Big Quilcene estuarine channel restoration. 10. Beck estuarine marsh restoration. The individual 10 phases are envisioned to work together as a single large estuary restoration project that together will restore ecosystem processes in Quilcene Bay. The current 50-acre project is a vital element of the overall project. The 50 acre project is particularly important to the other projects because it 1) provides a restored habitat corridor between the Big Quilcene River mouth and the Indian George Estuary, 2) its contribution to the overall restoration of Quilcene Bay's tidal prism is vital in the restoration of the Bay's sediment transport capacity, and 3) its location adjacent to the Big Quilcene River mouth a) provides immediately accessible high quality habitat for Big Quilcene salmonids upon their entry into the marine environment and b) provides an ecologically appropriate area for fluvial sediment deposition.

II. PROJECT HYPOTHESIS

Provide a hypothesis of how current habitat conditions and habitat forming processes will be improved or affected by this project. Describe a logical basis for the project, including which processes the proposed action will affect, what type of effect the action is expected have on processes, what types of structural changes are expected to occur as a result, and ultimately how this will lead to the proposed outcome. State the nature, source, and extent of the altered conditions that this project will address or help understand. Address the primary causes of the problem, not just the symptoms. Document your sources of supporting information by citing specific studies, reports, or other documentation. ***Reconnecting isolated wetland habitats is a cost-effective and functionally effective approach for restoring wetland habitats, especially in coastal areas. This project proposes to completely remove 3,000 feet of saltwater levee down to the current surrounding elevation. As a part of restoring the natural tidal channel network, native material from the levee will be used to backfill the borrow ditches, which are adjacent to and parallel to the dike. Any remaining levee material will be hauled off-site to a nearby county pit.***

Historic tidal channels still persist within the diked area, although they have partially filled in with sediment and vegetation from the years of agricultural activity and isolation from tidal action. We propose to restore up to 2,700

feet of those channels by excavating them to appropriate width, depth and geometry, and reconnecting them with channels outside the dike. These restored channels will provide for natural processes to form additional tidal channels on the 38-acre restoration site.

The levee's exterior adjacent to Quilcene Bay is reinforced with thousands of car tires. These tires will be removed and properly disposed of.

Intertidal areas cleared of fill will be left to revegetate naturally from the surrounding salt marsh seed bank. This has been an effective revegetation technique in other similar projects in the area. Palustrine emergent wetlands (8 acres) above salt influence will be revegetated with appropriate native vegetation.

Mean higher high water (MHHW) elevation in Quilcene Bay is approximately 11.2 feet. The elevation of the top of the dike varies from elevation 13.0 feet to 17.5 feet. High winter tides in the area regularly reach 13.4 or higher (still water) and can exceed 15.4 feet. The existing dike is in very poor repair and is only marginally functional as a flood protection dike. Figure 1 shows the estimated flood protection boundary of the existing dike based on LIDAR topography (uncorrected). Based on our preliminary hydraulic analysis using LIDAR and existing tidal data, the project will not increase the flood level or frequency to local properties or public roadways.

III. PROJECT GOALS AND OBJECTIVES

List the project's goals and objectives. Objectives are statements of specific outcomes that typically can be measured or quantified over time. Objectives are more specific than goals (visions of the desired future condition) and less specific than tasks (the specific steps that would be taken to accomplish each of the objectives). For example, the objectives of a nearshore project might be to increase tidal flushing, allow fish access and use, restore floodplain functions, sediment transport, dissipation, and water storage. Explain how achieving the objectives will address and help solve the problem identified in II above.

Describe how the project will benefit to salmon and provide significant ecological benefits. *Expected benefits from this project include increased quantity and quality of: 1) coastal wetlands, 2) resident and migrant waterfowl habitat, 3) shorebird, wading bird and water bird habitat, 4) migrant and anadromous fish habitat, 4) production of vegetation and organisms for marine food webs, 5) water quality benefits for Quilcene Bay and Hood Canal, and 6) increased food production for a variety of wildlife species including orcas, Stellar sea lions, and piscivorous birds. This project is located within a migratory corridor utilized by multiple salmon stocks. ESA listed Chinook and Summer Chum are considered most dependent on this area for long term sustainability. Historical evidence shows that ESA listed summer chum spawning extended into a significant portion of the floodplain from the river mouth upstream. This project will also benefit SASSI depressed coho (spawning, incubation and rearing), winter steelhead (spawning,*

incubation and rearing), pinks (spawning and incubation) and sea run cutthroat (spawning, incubation and rearing). Extensive research throughout the northwest has correlated survival rates of chinook and chum juveniles with the ability of estuarine and sub estuarine habitats to provide feeding, rearing, and broad freshwater/saltwater transition zones (Groot and Margolis 1994). Benefits of this project will be permanent as the purpose is primarily to remove human caused structures and allow natural processes to form habitat.

Describe how the project actions incorporate habitat important to key biota, i.e., the project should address sustainable habitats critical to the targeted species. ***Wetland functions and values will be improved by the proposed project in multiple ways.***

- 1. Removal of the saltwater dike and the restoration of unimpaired tidal inundation cycles will dramatically improve 38 acres of estuarine and palustrine wetlands.***
- 2. Cattle grazing within this coastal wetland complex will be discontinued once the dike is removed, thus decreasing direct loading of nitrogen and fecal coliform to Quilcene Bay.***
- 3. Increased tidal inundation will allow for improved sediment routing, detention, and remediation, including abatement of contaminants associated with those suspended sediments.***
- 4. Tidal wetlands are effective at removing nutrients both in a conventional method through uptake and through a chemical method associated with the wet-dry cycles of the tidal environment. Restoration of tidal wetlands is an important component of regional corrective action plans for decreasing nutrient inputs, which contribute to algal blooms and low dissolved oxygen episodes in Hood Canal.***

Tidal marsh complexes provide critical rearing habitat for migrant juvenile salmonids, among other fish species, three of which are listed under the federal Endangered Species Act (ESA). Restoration of salt marshes, tidal channels, emergent freshwater wetlands, and riparian areas are important corrective actions identified in federally adopted salmon recovery plans for Puget Sound Chinook and Hood Canal summer chum salmon. The proposed project is directly identified as a high priority action within both plans. In addition, increased salmon production will benefit other organisms higher in the trophic system, including ESA-listed bull trout, orca whale, Stellar's sea lion, bald eagle, coho salmon and steelhead trout (federal candidate species.) Estuarine habitat has been identified as being critically important to the survival of summer chum and Chinook. Several watersheds throughout Hood Canal are comprised of estuaries that have been significantly altered by human activity (road crossings, diking, fill). These watersheds currently yield low productivity despite high quality upstream spawning and rearing habitat. This has been attributed to several factors including to the mortality bottleneck caused by insufficient estuarine habitat. Key factors for estuarine habitat decline have been identified and will be adequately addressed in this project.

IV. PROJECT APPROACH

Briefly describe the geographic setting of the project (main stem, estuary, shoreline, marine, etc.) and the life cycle stage(s) affected. ***This project is located within the floodplain of the lower main stem and estuary of the Little Quilcene River and Donovan Creek in Jefferson County adjacent to the town of Quilcene and affects adult and juvenile salmonids including listed summer chum and chinook. The project components have been well thought out due to earlier investigations. The exact design will be somewhat dynamic due to the inclusion of the Project Team. However, this should add to the certainty of success. Army Corps standards and directives will apply for removing material and re-deploying inside and outside the flood plain.***

Describe the landscape context of the project, i.e., scale and size of the project, connectivity in relation to surrounding habitats, and complexity of existing vs. restored habitats. ***The Quilcene Estuarine Wetlands Restoration and Protection Project is Phase 6 of the overall Quilcene Bay Ecosystem Restoration Project. Other phases of the project are identified in figure 2. Earlier phases are: 1. Big Quilcene riverine and estuarine dike removal north, completed 1995 (upper) and 2005 (lower). 2. Indian George Estuary restoration completed 2000 to 2001. 3. Donovan Creek tidal prism restoration funded and scheduled for completion in 2006. 4. Nylund saltwater dike removal & estuarine marsh restoration, funded and scheduled for completion in 2007. 5. Little Quilcene riverine dike removal and estuarine channel restoration funded and scheduled for completion in 2007 to 2008. Future phases will likely include: 7. Little Quilcene delta cone removal. 8. Big Quilcene delta cone removal. 9. Big Quilcene estuarine channel restoration. 10. Beck estuarine marsh restoration. The individual 10 phases are envisioned to work together as a single large estuary restoration project that together will restore ecosystem processes in Quilcene Bay. The current 50-acre project is a vital element of the overall project. The 50 acre project is particularly important to the other projects because it 1) provides a restored habitat corridor between the Big Quilcene River mouth and the Indian George Estuary, 2) its contribution to the overall restoration of Quilcene Bay's tidal prism is vital in the restoration of the Bay's sediment transport capacity, and 3) its location adjacent to the Big Quilcene River mouth a) provides immediately accessible high quality habitat for Big Quilcene salmonids upon their entry into the marine environment and b) provides an ecologically appropriate area for fluvial sediment deposition.***

List the individuals and methods used to identify the project and its location. ***This project has been identified by the WDFW, Jefferson County Conservation District, the Hood Canal Coordinating Council and the Pt. No Pt. Treaty Tribes. There have been many individuals that have worked on, assessed, surveyed and planned for this project including Al Latham, Randy Johnson, Richard Brocksmith and many others. This project, like most dike removal projects, normally are projects that do not need a great deal of discussion. The dikes just need to be removed to allow the habitat to restore itself when possible. The timeline is***

as follows: The project has been presented to the public during two public meetings, in 2005 and most recently on May 25, 2006.

WDFW, the Port Gamble S'Klallam and Skokomish Tribes, Jefferson County Conservation District, the Hood Canal Coordinating Council, and the Washington Conservation Commission jointly developed the project concept in 2003. In 2006 the landowners Larry and Arleen Schinke, the Hood Canal Salmon Enhancement Group, Jefferson County Conservation District, WDFW, the Jefferson Land Trust, and the Hood Canal Coordinating Council have collaborated on details of the 50-acre project.

Describe the consequences of not conducting this project at this time. For acquisition projects, also describe the current level and imminence of risk to habitat. Describe the project design and how it will be implemented. *This project, like many others, if not done now, will prolong the restoration of critical estuarine functions and continue to limit salmon productivity within the watershed. Design is being implemented through on site surveys, aerial photographs and lidar imagery by qualified environmental engineers with experience in this arena. The sooner we begin to restore our estuaries and nearshore environments throughout Hood Canal, the sooner we will see salmon recovery. The importance of estuaries to salmonids has been well stated. This is a straight forward project which is waiting to be implemented. There are no landowner concerns nor are there any legal obligations associated with this project. We currently have an extremely willing landowner which provides an impetus to move quickly. The project design is being developed by the Hood Canal Salmon Enhancement Group with collaboration with the WDFW, local Tribes and the HCCC.*

Explain how the project's cost estimates were determined. *The projects cost estimates were determined through engineering methods from the resources mentioned in the question above.*

Describe other approaches and opportunities that were considered to achieve the project's objectives. *Other companies, agencies and agents were consulted about alternative methods for the removal of dikes in like situations. All information was studied to determine the best approach for this particular system.*

If the project includes an acquisition element, then briefly describe the extent to which habitat to be acquired is currently fully functioning and/or needs restoration; the timeframe in which responses or improvements in habitat functioning are expected; and the continuity of the proposed acquisition with other protected or functioning habitat in the reach. **N/A**

Identify the staff, consultants, and subcontractors that will be designing and implementing the project, including their names, qualifications, roles and responsibilities. If not yet known, describe the selection process.

Lead Engineer – Pat McCullough ESA Inc. Over 60 environmental projects completed in Hood Canal Watershed.

Randy Johnson – WDFW

Bob Barnard - WDFW

Al Latham – Jefferson County Conservation District

Rich Carlson – USFWS

Richard Brocksmith - HCCC

Other selected by experience in nearshore and estuary issues and familiar with Hood Canal Watershed. List as yet to be completed.

List project partners. When appropriate, include a letter from each participating partner briefly outlining its role and contribution to the project. (See Section 15 for a sample format.) ***The main partners in this project are the WDFW, Jefferson County Conservation District, Les Schwab Company, The National Coastal Wetlands Conservation Program, USFWS, Schinke's and the HCSEG***

List all landowner names. Include a signed form from each landowner acknowledging their property is proposed for SRFB funding consideration. (See Section 16 for a sample format.) ***All work will be completed on the Schinke property which has sole ownership of the site.***

Describe how the project will contribute to our understanding of the ecosystem or how to restore it. ***There are other river systems on Hood Canal which have been similarly impacted by the construction of dike systems. Lessons will be learned of the effects of removing long-existing dike systems. There will be more reliability in predicting the effects of dike removal on more land-sensitive river systems.***

Through development of and by the Project Team, this study will lead to the identification of the best alternatives and opportunities for success. This is a very certain project in allowing fairly immediate access to areas where obstacles have prevented salmonid migration for many decades. It is a cost effective and efficient method to achieve success in one season. All project activities will be timed to minimize disturbance to salmonids.

An uncertainty does exist in the amount of material required to be removed from the dikes and re-deployed. It may be desirable to actively modify the restoration work to account for the need of different widths/openings in the dike system in order to see what opening acts as the catalyst for nature to work at optimum levels. USFWS has been consulted for comparisons and their input.

Provide the performance measures associated with the project. Every recovery action must have explicit performance measures that directly relate to the goals of the project, i.e., growth rates or survival of salmon, sedimentation rates, change in recruitment of large wood, and change in the amount of specific habitat type(s). ***Performance measures in this project revolve around several habitat factors known to correlate with juvenile salmon survival. By increasing nearshore habitat more juveniles will survive to return as adults. The evaluation regarding salmon productivity will begin in 3 years after completion of adult spawner counts. The HCSEG is well trained to do so***

and will monitor with other partners into the future. Immediate monitoring will include measuring changes in salinity within newly opened channels, salmon usage of newly opened channels, vegetation characteristics, and estuarine surface area.

Describe the long-term stewardship and maintenance obligations of the project. Projects should be consistent with habitat forming processes in the watershed, requiring reduced up-keep and long-term maintenance over time. ***The HCSEG has developed a long range monitoring plan which includes estuary evaluation and monitoring. We also include long term maintenance with all of our programs and have funding in place to deal with unexpected problems. We have returned on request every time an issue has come forward about one of our projects. During project construction and after the HCSEG will monitor the site for construction integrity and HPA compliance, any adaptive measures will be taken to ensure site stability. Upon completion of the project, the site will be monitored for fish and wildlife use. The HCSEG staff, interns and volunteers will conduct spawner surveys on both the Big and Little Quilcene Rivers. Longitudinal profiles have been established by the JCCD and will be repeated periodically to document topography changes. Photo documentation of the physical evolution of the site prior to following restoration will be maintained by local biologists, and the site will be monitored into the near future for effectiveness, however the site should be self-sustaining after the restoring the physical process.***

Each project should include an adaptive management type of approach that provides some level of contingency planning. Explain how you will address these constraints. ***As explained in the last question, the HCSEG has a contingency fund built into our budget to deal with unforeseen problems or needs. As with all environmental projects, there is always something that comes up that was not expected. We start each project with the realization that this might happen and then prepare for the situation and respond accordingly. We have never been caught in a situation that could not be corrected to everyone's satisfaction.***



V. TASKS AND TIME SCHEDULE

List and describe the major tasks and time schedule you will use to complete the project. ***Preliminary engineering and design is complete. Permitting will begin by the December 2006 and construction should be implemented by July 15 2007 with completion prior to October 15 2007.***

VII. CONSTRAINTS AND UNCERTAINTIES

Describe the relationships between uncertainty, risk, expected ecological benefits, and potential learning that may affect successful completion of the project. Not everything will go as expected. ***There is not a project we are involved with that adaptive management does not come into play. One can never tell exactly what issues might arise but we try to bring as many people as possible into the equation so as to limit this liability. There are few biological uncertainties that might***

come up we have not already taken into consideration such as the affect of past cattle contamination on the site and its corresponding effect on the water quality of the area. This and other issues concerning adjacent property owners are under scrutiny and will be adequately addressed.

Describe the costs of the project relative to other factors. Project costs relative to such factors as risk, uncertainty and the expected benefits should be considered. Maintenance, contingency, adaptive management, and monitoring costs should all be considered in the overall cost of any protection or restoration project. ***As explained in previous questions, the HCSEG has a contingency fund built into our budget to deal with unforeseen problems or needs. As with all environmental projects, there is always something that could come up that was not expected. We start each project with the realization that this might happen and then prepare for the situation and respond accordingly. We have never been caught in a situation that could not be corrected to everyone's satisfaction. The future maintenance of the project will be the responsibility of the property owner with maintenance assistance from HCSEG. The HCSEG will continue the long term monitoring and evaluation of the site.***

15. Project Partner Contribution Form

Project Partner: National Coastal Wetlands Conservation Program

Partner Address:

Contact Person

☐ Mr. ☐ Ms. Title

First Name: Last Name:

Contact Mailing Address:

Contact E-Mail Address:

Description of contribution to project:

Estimated value to be contributed: \$__350,000_____

Partner's signature

Date

15. Project Partner Contribution Form

Project Partner: HCSEG

Partner Address: PO Box 2169 Belfair, Washington 98528

Contact Person

☐ Mr. ☐ Ms. Title Executive Director

First Name: Neil Last Name: Werner

Contact Mailing Address: PO Box 2169 Belfair, Washington 98528

Contact E-Mail Address: neil@hcseg.org

Description of contribution to project:

Estimated value to be contributed: \$__176,570_____

Partner's signature

Date

16. Landowner Willingness Form

Landowner Information:

Name of Landowner:

Landowner Contact Information:

☒ Mr. ☐ Ms. Title

First Name: Larry Last Name: Schinke

Contact Mailing Address:

Contact E-Mail Address: 14813 S.E. Fairwood Blvd. Renton, Washington 98058

Property Address or Location: Linger Longer Road, Quilcene, Washington

I certify that _____ is the legal owner of property described in this grant
(landowner or organization)

application to the Salmon Recovery Funding Board (SRFB). I am aware the project is being proposed on said property. My signature authorizes the applicant listed below to seek funding for project implementation, however, does not represent authorization of project implementation.

Landowner Signature

Date

Project Applicant Information

Project Name:

Project Applicant Contact Information:

X Mr. ☐ Ms. Title Executive Director

First Name: Neil Last Name: Werner

Contact Mailing Address: PO Box 2169 Belfair, Washington 98528

Contact E-Mail Address: neil@hcseg.org

Lead Entity Organization: Hood Canal Coordinating Council